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ABSTRACT

This guide is intended to assist basic skills and/or literacy instructors, administrators, and tutors in selecting appropriate educational software, hardware, and instructional systems. Discussed first are the software evaluation process on which the guide is based, the evaluation form used, and the guide's organization. Section 2 lists the more than 200 software products evaluated. Each product's curriculum area, rating on a four-point scale, instructional level, and price are included. Presented in section 3 is a matrix of 28 featured software products that includes information on each product's cost, curriculum area, program method, instructional level, and hardware requirements. In section 4, the same featured products are described in greater depth, and their strengths and weaknesses are detailed. The following large computer-assisted instruction systems are discussed in section 5: Computer Curriculum Corporation, Comprehensive Competencies Program, Classworks, Computer Systems Research, INVEST, Pathfinder, PLATO, WASATCH, and WICAT. Included in the discussion are brief descriptions of each system, a checklist for evaluating and comparing different systems, and information on system integration. Section 6 is a resource guide that includes the following: a glossary, answers to commonly asked questions about hardware, a listing of 130 publishers supplying software for adult applications, and an annotated list of 10 periodicals discussing technology and its applications to adult basic skills. (MN)

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Regional Literacy Resource Center

ED 368 903

SOFTWARE BUYER'S GUIDE

1993 EDITION

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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The Northwest Regional Literacy Resource Center—Technology Project *expresses thanks to all Site Representatives and contributors to this guide. We welcome the comments of its users. Every effort has been made to provide an accurate resource of software products. If errors or omissions are found, please inform us.*

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PREFACE

Description of the NRLRC–Technology Project

DESCRIPTION OF NRLRC–TECHNOLOGY PROJECT

The Northwest Regional Literacy Resource Center–Technology Project, (NRLRC–Technology Project) initiated in 1982 as the Adult Education Software Project, encourages adult education and literacy practitioners to more effectively use computer software in adult basic skills instruction. The project, funded by the Departments of Education in Alaska, Idaho, Oregon, and Washington, uses local adult education instructors and their students to evaluate software. Volunteer instructors and their students evaluate software for its appropriateness with adult basic skills students. The results of the evaluations are distributed nationally.

In addition to evaluating software and other technologies, the NRLRC–Technology Project coordinates staff development activites throughout the region. It regularly provides the direction and staffing of computer strands at state and regional conferences, conducts nationally advertised Software Institutes, and holds adult basic education programs in the participating states to provide local programs with ongoing information on technology.

This publication is made possible by a grant from the Office of Adult Literacy, Washington State Board for Community and Technical Colleges with federal funds authorized by Subpart 7 (State Literacy Resource Centers) of the National Literacy Act of 1991 (PL 102-73).

INTRODUCTION AND EVALUATION PROCESS

Guide Organization
Example of the Evaluation Form

GUIDE ORGANIZATION

This guide is designed to be used by basic skills and/or literacy instructors, administrators, and tutors. Each section features a different aspect of using software with the adult learner.

Section 1: Introduction and evaluation process

Oregon and Washington Adult Basic Education instructors and their learners reviewed a variety of software. They have assessed the programs and in most cases, the software has been used on the local program level with learners for several weeks. The local program practitioners, Site Representatives, are skilled instructors who volunteer to assess software. Each brings to the evaluation process expertise in instruction and in the use of technology with basic skills learners.

The evaluation form is included in the publication. The form, developed through funding by the Northwest Regional Literacy Resource Center, is designed specifically for adult basic skills learners.

Section 2: List of evaluated software

The listings consist of the assessed software by category. For convenience, the listing includes the title, the publisher/vendor, level, and price of the software.

Curriculum Area

The guide identifies six curriculum areas: Mathematics (basic arithmetic, algebra, geometry); Language (grammar, mechanics, structure, and spelling); Life Skills (problem solving, bilingual skills, and other daily coping skills); Reading (phonics, vocabulary, content areas, comprehension, analysis, and speed); Content Area (science and social studies); and Support (word processing/keyboarding, computer literacy, data bases, worksheet generators).

Rating

Each software program has a rating ranging from: 4.0 (excellent); 3.0 (good); 2.0 (fair); to 1.0 (not recommended). The decimal point variation on ratings reflects the average score given by two or more software evaluators.

Instructional Level

The range of instruction was divided into five levels; ESL(beginning through advanced); ABE (basic skills from beginning through grade 4); ABE+ (basic skills from grade 5 through grade 8); GED (high school level for GED skills); DE (developmental education for beginning college level).

Price

The listed price is retail. In some cases a range is given, depending on the platform used. Often educators can receive discounts and obtain lower prices.

GUIDE ORGANIZATION

Section 3: Matrix of Featured Software with Evaluating Criteria

This section presents a visual, quick reference guide to the Featured Software in Section 4. It shows selected criteria by software program title.

Section 4: Featured Software

The software included in the Featured Software Section received good to excellent ratings, was used in instructional programs with basic skills learners, and passed a screening process of a team composed of practitioners selected for their expertise in technology and in basic skill instruction. The featured software encompasses a broad range of basic skills. The mathematics curriculum area ranges from drill and practice on basic multiplication facts to word problems and algebra. The reading curriculum area spans the range from the beginning reading level to GED preparation and includes vocabulary building, comprehension development, and phonics. The language curriculum area includes drills on grammar usage, spellling and sentence structure. The life skills curriculum area encompasses problem solving games, bilingual activites, and daily coping skills. Support materials includes a variety of miscellaneous software such as word processing/keyboarding skills, databases, worksheet generators and print aids.

Users of this guide are reminded that software must fit the learner, the instructional setting, the hardware, and the instructional approaches. No one software program will be highly successful with all learners. The board emphasizes that the software technology should be utilized as a supplement to other instruction, not a replacement.

Section 5: Large Computer Assisted Instruction Systems

The information in this section concentrates on large computer assisted instruction systems. It reviews nine systems: CCC, CCP, CSR, INVEST, Pathfinder, Classworks, PLATO, WASATCH and WICAT. There is a discussion of the use and integration of sytems with a brief description and checklist for evaluation with points to consider and compare.

GUIDE ORGANIZATION

Section 6: Resource Guide

The reference section of this publication includes:

The Glossary of Terms
A summary of definitions of computer terms which are commonly encountered is included.

Hardware Decisions
This is a section on the most often asked questions about hardware.

The Listing of Publishers
Included here is list of addresses of software publishers which supply software for adult applications.

Periodicals
This is an annotated reference to periodicals which discuss technology and its applications to adult basic skills.

Order Form

Northwest
REGIONAL LITERACY RESOURCE CENTER

Publishing Information:

Title: _____
Publisher: _____ Date: _____
Address: _____
Phone: _____ Price: _____

Type of Technology:

_____
_____
_____

Hardware Requirements:

_____
_____
_____

Program Information: *(Circle appropriate response)*

Adult Interest	**Instructional Level**	**Curriculum Area**	
Yes No	Literacy (0-4)	Careers	Math
	ABE+ (5-8)	Citizenship	Prob.Solve/Thinking
(Circle	ESL	Health	Reading
appropriate	GED	Life Skills	Science
response)	Develop. Ed.	Language Mechanics	Social Studies
Support Materials		**Documentation**	**Staff Training**
Workbooks	Worksheets	Good	Included
Answer Key	Text Cassette	Fair	Available for cost
Video	Other: _____	Poor	Not needed

Reviewer Information:

Name: _____ Title: _____
School/Institution: _____ Date of Review: _____
Address: _____
City/State/Zip: _____ Phone: _____

Technology Coordinator NRLRC 1701 Broadway Seattle,WA 98122 (206)587-3880

Instructional Format:

	Yes	No	N/A
1. Are directions available on the disk?			
2. Are directions appropriate to reading level of the program?			
3. Is the use of graphics appropriate for adult learners?			
4. Is the lesson content appropriate to the intended reading level?			
5. Are the number of questions and speed of program appropriate?			
6. Is the use of audio appropriate for adult learners?			
7. Is the content accurate and free from errors?			
8. Is the content free of racial/sex/age/ethnic stereotypes?			
9. Does the program achieve its defined purposes?			
10. In a multiple choice format, are the correct answers too obvious?			
11. Is there only one type of activity, such as multiple choice?			
12. Is there positive reinforcement and motivation?			
13. Is there reward for failure (such as interesting graphic for wrong answer)?			
14. Is there reinforcing feedback after correct answers?			
15. Is there help after an incorrect answer?			
16. Is there branching, which moves students into harder or easier activities based on performance?			

Program Format:

	Yes	No	N/A
1. Is there user control of program?			
2. Does the disk begin with a menu?			
3. Can the menu be returned to easily?			
4. Can the instructions be bypassed?			
5. Is there a "bookmark" feature to reenter the place most recently completed?			
6. Is the audio adjustable?			
7. Can the program be modified?			
8. If yes, is the modification easy?			

Management Format:

	Yes	No	N/A
1. Is there a student recordkeeping system?			
2. If so, is it easy to use?			
3. Can records be deleted?			
4. Can student records be printed?			
5. Is there a password or other security for the management system?			

Evaluative Comments: *(Describe strengths and weaknesses)*

Strengths: _____

_____

_____

Weaknesses: _____

_____

_____

Instructional Applications: *(circle appropriate response)*

Individualized Classroom with Tutor or Instructor Cooperative Learning Stand-alone Lab

Competency Based: Washington Core Competency or Oregon CASAS

Comments: _____

Overall Rating: **(4) Excellent** **(3) Good** **(2) Fair** **(1) Not Recommended**

LIST OF EVALUATED SOFTWARE

Complete Listing of Evaluated Software
By Curriculum Area, Rating, Instructional Area, Price

(featured software is emboldened)

Rating	Instructional Level	Program Title	Publisher	MATHEMATICS
4.0	GED	Story Problems (Algebra)	AWA Software	$125.00
4.0	ABE+, GED	Scientific Method	Cygnus Software	$39.00
4.0	GED, DE	**Alge-Blaster!**	Davidson & Associates, Inc.	$59.95 - $69.95
4.0	ABE+, GED	**Math Blaster Mystery**	Davidson & Associates, Inc.	$59.95 - $69.95
4.0	ABE, GED	**Basic Math Competency Skill Building**	Educational Activities, Inc.	$349.00
4.0	ABE+, GED	**Basic Math Competency Skill Building:**	Educational Activities, Inc.	$59.95
4.0	ABE+, GED, DE	**Ratio and Proportion**	Educational Activities, Inc.	$65.00
4.0	All Levels	Integers and Equations	Hartley, Division of Jostens Learning	$49.95
4.0	GED, DE	Escape From Algebra	Milliken (Learning Services)	$34.95
4.0	ABE+, GED	Math Sequences Series	Milliken (Learning Services)	$209.00
4.0	ABE+, GED	Math Shop	Scholastic, Inc.	$69.95 - $89.95
4.0	ABE, ABE+	**Math Tutor--Division**	Scholastic, Inc.	$69.95
4.0	ABE, ABE+	**Math Tutor--Fractions part 2**	Scholastic, Inc.	$69.95
4.0	ABE, ABE+	**Math Tutor--Multiplication**	Scholastic, Inc.	$69.95
4.0	All Levels	How the West was One + Three X Four	Sunburst Communications, Inc.	$65.00 - $79.00
3.5	ABE+, GED, DE	Basic Skills	Advanced Ideas, Inc.	$58.90
3.5	ABE, ABE+	Fast Facts	Edu Soft	$34.95
3.5	ABE, ABE+	Arithmetic Doctor	Educational Activities, Inc.	$349.00
3.5	All Levels	Geometry Alive	Educational Activities, Inc.	$159.00
3.5	ABE+, GED, DE	Solving Story Problems-Geometry	Houghton Miffin Company	$120.00
3.5	ABE+, GED, DE	Skills Bank II	Skills Bank	$1,245.00
3.5	ABE+, GED	Survival Math	Sunburst Communications, Inc.	$65.00
3.25	ABE+, GED	High School Math Competency	Microcomputer Workshop Course. (Queue)	$99.00
3.0	GED	Fractions, Percents and Decimals	Aquarius People Materials, Inc.	$39.95
3.0	GED, DE	Ninth Grade Math Competencies	Aquarius People Materials, Inc.	$1775.00
3.0	GED	Solving Word Problems I, II, III	Aquarius People Materials, Inc.	$115.00
3.0	ABE, ABE+	Math Blaster Plus!	Davidson & Associates, Inc.	$59.95 - $69.95
3.0	ABE+, GED, DE	Math for Everyday Living	Educational Activities, Inc.	$119.00
3.0	ABE, ABE+	Math Concepts: Level 1	EduQuest, Division of IBM	$152.00
3.0	ABE+, GED	The Word Problem Game Show	GAMCO Education Materials	$59.00
3.0	ESL, ABE, ABE+	Expanded Notation	Hartley, Division of Jostens Learning	$49.95
3.0	ABE+, GED, DE	Greatest Common Factor/Least Common	Queue Inc.	$39.95
3.0	ABE, ABE+	Math Tutor--Decimals	Scholastic, Inc.	$69.95

Rating	Instructional Level	Program Title	Publisher	MATHEMATICS
3.0	ABE, ABE+	Math Tutor--Fractions	Scholastic, Inc.	$69.95
3.0	ABE	Quotations	Scholastic, Inc.	$29.95
3.0	ABE+, GED	Transition Math Software Package	Scott, Foresman & Company	$89.95 - $129.99
3.0	ABE, ABE+, GED	Demolition Division	SRA	$46.00
3.0	ABE+	Dragon Mix	SRA	$46.00
3.0	GED	GED 2000	Steck-Vaughn	$1495.00
3.0	GED, DE	GED Adult Series: Math	The Kentucky Network	$365.00
3.0	ABE+, GED	**Decimal Dungeon**	Unicorn Software Company	$29.95 - $49.95
3.0	ABE+, GED	**Fraction Action**	Unicorn Software Company	$29.95 - $49.95
3.0	ABE, ABE+	**Hands-On Math, Volume 1**	Ventura Educational Systems	$59.95
2.75	All Levels	Read and Solve Math Problems	Educational Activities, Inc.	$389.00
2.5	ABE	Math Facts II	Morning Star Software, Inc.	$150.00
2.0	ABE+, GED	Essential Mathematics	Aquarius People Materials, Inc.	$115.00
2.0	ABE+, GED	Math Concepts: Level 3	EduQuest, Division of IBM	$152.00
2.0	DE	Special Topics in Mathematics	Queue, Inc.	$155.00 - $215.00
1.0	GED, DE	Lessons in Algebra	George Earl Software	$29.95

Rating	Instructional Level	Program Title	Publisher	LANGUAGE
4.0	All levels	Diascriptive Language Arts Development	Educational Activities, Inc.	$395.00
4.0	ABE	English Basics I	Educational Activities, Inc.	$199.00
4.0	ESL, ABE	Verb Usage - Multi-Pack	Hartley, Division of Jostens Learning	$119.95
4.0	All Levels	Microcourse Language Arts-Sentence	Houghton Mifflin Company	$120.00
4.0	ABE+, GED, DE	Spelling Rules	Micro Power & Light	$209.65
4.0	GED, DE	English Achievement III	Microcomputer Workshop Course. (Queue)	$39.95
4.0	ABE	Grammar Problem Practice	Milliken (Learning Services)	$225.00
4.0	All Levels	Sentence Combining I & II	Milliken (Learning Services)	$290.00
3.75	ABE+, GED, DE	Diascriptive Reading II	Educational Activities, Inc.	$395.00
3.5	ESL	**Quick Talk**	Educational Activities, Inc.	$295.00
3.5	ABE+, GED, DE	Skills Bank II	Skills Bank	$1,245.00
3.5	GED, DE	Business of Better Writing	The Kentucky Network	$595.00
3.25	ABE	Words at Work: Contraction Action	MECC (Minnesota Ed. Computing Consortium)	$59.00
3.0	ABE	English Basics II	Educational Activities, Inc.	$129.00
3.0	ESL	**Fluency Practice**	Gessler Educational Software	$59.95
3.0	ABE+	Microcourse Language Arts-Mechanics	Houghton Mifflin Company	$120.00
3.0	ABE+	Microcourse Language Arts-Usage	Houghton Mifflin Company	$120.00
3.0	GED	Capitalization Plus	Microcomputer Workshop Course. (Queue)	$44.95
3.0	ABE+, GED	Writing Workshop	Milliken (Learning Services)	$450.00
3.0	ESL, ABE+	Prefixes, Suffixes, Root Words	Queue Inc.	$49.95
3.0	ABE+, GED, DE	Success with Writing	Scholastic, Inc.	$99.95 - $129.95
3.0	ABE+, GED	Spelling Wiz	SRA	$46.00
3.0	ABE+, GED	Verb Viper	SRA	$46.00
3.0	GED	GED 2000	Steck-Vaughn	$1495.00
3.0	ABE+, GED, DE	Punctuation Put On	Sunburst Communications, Inc.	$79.00 each
2.75	ABE+, GED, DE	Adjectives	Hartley, Division of Jostens Learning	$49.95
2.75	ABE	Adverbs	Hartley, Division of Jostens Learning	$49.95
2.75	ABE	Capitalization	Hartley, Division of Jostens Learning	$59.95
2.75	ABE	Nouns/Pronouns	Hartley, Division of Jostens Learning	$49.95
2.75	ABE	Verb Usage 1, 2, 3, 4	Hartley, Division of Jostens Learning	$39.95 each
2.5	ABE+, GED	Grammar Gremlins	Davidson & Associates, Inc.	$59.95
2.5	ABE, ABE+	Spelltronics	Educational Activities, Inc.	$79.00
2.5	ABE+, GED	Adventures in Space	Queue Inc.	$29.95

Rating	Instructional Level	Program Title	Publisher	LANGUAGE
2.25	ABE	Verbs	Hartley, Division of Jostens Learning	$49.95
2.0	ABE+, GED, DE	Grammar and Writing: Language Arts	Britannica (Looking Glass Learning Products)	$239.00
2.0	ABE, ABE+	Capitalization	Educational Activities, Inc.	$59.95
2.0	ABE, ABE+	Punctuation I, II	Educational Activities, Inc.	$109.00
2.0	ABE+, GED	Combining Sentences: Level 2, 3, 4	EduQuest, Division of IBM	$285.00
2.0	All levels	Essential Grammar	GAMCO Education Materials	$54.95
2.0	All levels	Parts of Speech	GAMCO Education Materials	$54.95
2.0	GED, ESL	Tenses of verbs	Intellectual Software	$34.95
2.0	ABE+, GED, DE	Learning to Write: Sentences and Paragraphs	Queue Inc.	$54.95
2.0	ABE+, GED, DE	ESL Writer	Scholastic, Inc.	$99.95
1.25	All Levels	M-SS-NG L-NKS	Sunburst Communications, Inc.	$65.00
1.0	ABE+	Mark Up	Mind Builders	$59.95

Rating	Instructional Level	Program Title	Publisher	CONTENT AREA
4.0	DE	The Environment I: Habitats & Ecosystems	EduQuest, Division of IBM	$56.00
4.0	GED, DE	The Environment II: Cycles and Interactions	EduQuest, Division of IBM	$56.00
4.0	GED, DE	Human Life Processes I: Cellular Physiology	EduQuest, Division of IBM	$56.00
3.0	GED, DE	Human Life Processes III: Development &	EduQuest, Division of IBM	$56.00
3.0	GED, DE	Human Life Processes II: Systems Level	EduQuest, Division of IBM	$56.00

Rating	Instructional Level	Program Title	Publisher	READING
4.0	ESL, ABE	MacEnglish	Division of John Wagner	$4,150.00
4.0	All Levels	Core Reading & Vocabulary Devel.	Educational Activities, Inc.	$650.00
4.0	ABE	Dilemma	Educational Activities, Inc.	$159.00
4.0	ABE+, GED, DE	Reading and Writing Connection I	Hartley, Division of Jostens Learning	$59.95
4.0	ESL, ABE	That's My Job! I , II	Hartley, Division of Jostens Learning	$59.95 each
4.0	ESL, ABE, ABE+	Discover Intensive Phonics	HEC Reading Horizons	$1,695.00 - $1795.00
4.0	ESL, ABE	Microcourse Reading-Word Attack	Houghton Mifflin Company	$120.00
4.0	All Levels	Reading Around Words	I/CT (Instructional/Communications Technology)	$160.00
4.0	All Levels	Comprehension Power	Milliken (Learning Services)	$225.00
4.0	All Levels	Rhubarb, Version 2	Mind Builders	$69.95
3.75	All Levels	How to Read for Everyday Living	Educational Activities, Inc.	$139.00
3.5	ABE, ABE+, GED	Speed Reader II	Davidson & Associates, Inc.	$59.95
3.5	ABE+, GED	Word Attack Plus!	Davidson & Associates, Inc.	$59.95
3.5	ABE+, GED, DE	Microcourse Reading-Study Skills	Houghton Mifflin Company	$120.00
3.5	ABE+, GED	**Computerized Placement**	I/CT (Instructional/Communications Technology)	$200.00
3.5	ABE	Phonics Prime Time: Blends and Diagraphs	MECC (Minnesota Ed. Computing Consortium)	$59.00
3.5	ABE	Word Munchers	MECC (Minnesota Ed. Computing Consortium)	$59.00
3.5	ESL	**Words, Words, Words**	Profiles Corporation	$189.00
3.5	ABE+, GED, DE	Skills Bank II	Skills Bank	$1,245.00
3.0	ESL	**ALA Lab System**	American Language Academy	$2000.00
3.0	ABE+, GED, DE	Micro School Programs Readability Estimator	Bertamax Educational Software, Inc.	$49.95
3.0	ESL/ABE	Q-Solution	Curriculum Associates	$489.00
3.0	ABE, ABE+, ESL	**Read 'N Roll**	Davidson & Associates, Inc.	$59.95
3.0	ABE, ABE+, ESL	Spell It Plus	Davidson & Associates, Inc.	$59.95 - $69.95
3.0	ABE+	Our Wierd and Wacky World	Educational Activities, Inc.	$99.95
3.0	All Levels	Reading in the Workplace: B/C Trades	Educational Activities, Inc.	$295.00
3.0	ABE, ABE+	Using Phonics in Context	Educational Activities, Inc.	$189.00
3.0	ABE +	Reading & Critical Thinking	Educulture	$159.95
3.0	ABE+, GED	Reading for Meaning: Level 3	EduQuest, Division of IBM	$158.00
3.0	ABE+, GED, DE	Moonlight and Madness I and II	Hartley, Division of Jostens Learning	$59.95 - $69.95 each
3.0	ABE+	Following Directions (Behind the Wheel)	Learning Well	$49.95
3.0	ABE+	Reading Between the Lines (Fantasy Land)	Learning Well	$49.95
3.0	ABE+	Reading for Detail (Race Track)	Learning Well	$49.95

Rating	Instructional Level	Program Title	Publisher	READING
3.0	ABE	Phonics Prime Time: Vowels I/II	MECC (Minnesota Ed. Computing Consortium)	$59.00 each
3.0	All Levels	Words at Work: Compound It	MECC (Minnesota Ed. Computing Consortium)	$59.00
3.0	All Levels	Words at Work: Prefix Power	MECC (Minnesota Ed. Computing Consortium)	$59.00
3.0	ABE+, GED, DE	**Diagnostic Prescriptive Readings in**	Merit	$256.00
3.0	ABE+, GED, DE	Comprehension Connections	Milliken (Learning Services)	$635.00
3.0	ABE+, ESL	Context Clues	Queue Inc.	$49.95
3.0	GED	GED Test #3: Science	Queue Inc.	$255.00 - $295.00
3.0	GED	Reading and Thinking IV	Queue Inc.	$54.95
3.0	ABE+, GED, DE	Word Master	SRA	$46.00
3.0	ABE, ABE+	Word Radar	SRA	$46.00
3.0	GED	GED 2000	Steck-Vaughn	$1495.00
3.0	All Levels	Evelyn Wood Dynamic Reader	Timeworks, Inc.(Dale Rettinger & Associates)	$39.95
2.75	ABE	Figurative Language	Hartley, Division of Jostens Learning	$49.95
2.75	ESL, ABE, ABE+	Project Star	Hartley, Division of Jostens Learning	$695.00
2.75	All Levels	Word at Work: Suffix Sense	MECC (Minnesota Ed. Computing Consortium)	$59.00
2.5	ABE+, GED, DE	Reference Micro Mysteries	Focus Media, Inc.	$99.00
2.5	ESL,ABE,ABE+	Rhyming Families	Hartley, Division of Jostens Learning	$59.95
2.25	ABE+, GED, DE	Analogies Advanced	Hartley, Division of Jostens Learning	$59.95
2.25	ABE+, GED, DE	Analogies Tutorial	Hartley, Division of Jostens Learning	$59.95
2.0	ABE	Wordwright	Britannica (Looking Glass Learning Products)	$99.00
2.0	ABE, ABE +, GED	Fundamentals of Reading	Educational Activities, Inc.	$159.00
2.0	ABE+, GED	Reading for Meaning: Level 1	EduQuest, Division of IBM	$131.00
2.0	GED	College-Level Reading Comprehension	Intellectual Software	$129.95 - $169.95
2.0	ABE, ABE+,ESL, GED	Reading and Critical Thinking	Intellectual Software	$159.95
2.0	GED	Reading for Competency	Intellectual Software	$95.00 - $125.00
2.0	ABE+	Reading and Thinking III	Queue Inc.	$54.95
2.0	ABE, ABE+, GED	Word Man	SRA	$46.00
2.0	ABE	Word Detective	Sunburst Communications, Inc.	$65.00
1.0	GED, DE	Lessons in Reading and Reasoning Package I-IV	Queue Inc.	$149.95 - $199.95

Rating	Instructional Level	Program Title	Publisher	LIFE SKILLS
4.0	ABE+, GED	**A Day in the Life**	Curriculum Associates	$999.99
4.0	ABE+, GED	**Super Munchers**	MECC (Minnesota Ed. Computing Consortium)	$69.00
4.0	All Levels	Mind Power I	Queue Inc.	$110.00
4.0	All Levels	Mind Power II	Queue Inc.	$110.00
4.0	All Levels	Ant Farm	Sunburst Communications, Inc.	$65.00
4.0	All Levels	The Pond	Sunburst Communications, Inc.	$65.00 - $79.00
4.0	All Levels	Type to Learn	Sunburst Communications, Inc.	$79.00 - $129.00
3.5	All Levels	The Game Show	Advanced Ideas, Inc.	$19.95 - $49.95
3.5	ABE+, GED	Where in Europe is Carmen Sandiego?	Broderbund Software, Inc.	$49.95 - $79.95
3.5	ABE+, GED	Where in the USA is Carmen Sandiego?	Broderbund Software, Inc.	$49.95 - $79.95
3.5	ABE+, GED	Where in the World is Carmen Sandiego?	Broderbund Software , Inc.	$49.95 - $79.95
3.5	ABE+, GED, DE	Interpreting Graphs	Conduit	$60.00
3.5	All Levels	Regions of the United States	Educational Activities, Inc.	$65.00
3.5	ABE+ ,GED	The Consitution and the Government	Educational Activities, Inc.	$179.00
3.5	All Levels	**Brain Train**	Rehabilitation Psychology Associates	$600.00 - $800.00
3.5	ABE+, GED, DE	Skills Bank II	Skills Bank	$1,245.00
3.25	ABE+, GED	The Consumer and the Law	Educational Activities, Inc.	$179.00
3.0	All Levels	Wizard of Words	Advanced Ideas, Inc.	$34.95 - $49.95
3.0	ABE+, ESL	**Approaches to Problem Solving**	Educational Publishing Concepts /EISI	$189.50
3.0	ABE	Clock	Hartley, Division of Jostens Learning	$49.95
3.0	ABE+, GED, DE	Building Memory Skills	Lawrence Productions	$69.95
3.0	ABE	Oregon Trail	MECC	$59.00 - $79.00
3.0	ESL, ABE	Spanish-English ESL Vocabulary Games	Queue Inc.	$59.95
2.5	ABE	Daily Living Skills: Classified Ads and Telephone	Britannica (Looking Glass Learning Products)	$49.00
2.5	ABE	Daily Living Skills: Prescription Medicines	Britannica (Looking Glass Learning Products)	$49.00
2.5	ESL, ABE+, GED	Where in Time is Carmen Sandiego?	Broderbund Software, Inc.	$49.95 - $79.95
2.5	ABE+, GED	Nutrition: A Balanced diet	Educational Materials & Equipment Inc.	$43.00
2.5	ABE	Exploring Tables And Graphs	Weekly Reader (Optimum Resource Inc.)	$49.95
2.0	GED	Cross Country USA	Didatech Software	$67.00 - $129.00
2.0	ABE	Calendar Skills	Hartley, Division of Jostens Learning	$49.95
2.0	ABE, ESL	Vocabulario	Queue Inc.	$39.95

Rating	Instructional Level	Program Title	Publisher	SUPPORT
4.0	All Levels	**America On Line/Adult Literacy**	America On Line	$5.00 - $10.00/hour
4.0	All Levels	**At Ease**	Apple Computer	$59.00
4.0	ESL, ABE +, GED	Type!	Broderbund Software, Inc.	$19.95
4.0	All Levels	**Textbook Toolbox**	Chemeketa Community College	$99.00
4.0	ABE+, GED	**Claris Works**	Claris	$149.00
4.0	GED, DE	Writer's Helper	Conduit	$135.00
4.0	All Levels	Crossword Magic Puzzle Series	Learning Well	$39.90
4.0	All Levels	OTAN (On-line Communication System)	Outreach & Technical Assistance Network	$99.00
3.75	ABE, GED	CAW: Computer Assisted Writing	Educational Activities, Inc.	$159.00
3.5	All Levels	AppleLink	Apple Computer	$70.00 + per minute fee
3.5	All Levels	Print Shop	Broderbund Software, Inc.	$49.95 - $79.95
3.5	All Levels	Miliken Word Processer	Milliken (Learning Services)	$69.95
3.25	ABE	O'Brien Vocabulary Placement Test	Educational Activities, Inc.	$29.95
3.0	ABE+ GED	**Aldus Personal Press v2.0**	Aldus	$150.00
3.0	ABE, ABE+, ESL	**Kid Pix**	Broderbund Software, Inc.	$49.95
3.0	All Levels	Core Vocab. Worksheet Generator	Educational Activities, Inc.	$195.00
3.0	ABE+, GED	E A Math Worksheet Generator	Educational Activities, Inc.	$159.00
3.0	All Levels	Writing Competency Program	Educational Activities, Inc.	$89.00
3.0	ABE	Word Search & Super Word Find	Hartley, Division of Jostens Learning	$49.95
3.0	All Levels	Bank Street Writer III	Scholastic, Inc.	$89.95 - $129.95
3.0	All Levels	Typing Tutor V	Simon and Schuster (Prentice Hall)	$49.95
2.5	All Levels	RAPID: Reading Assessment Profile	Krell Software Corp.	$199.95
2.0	All Levels	Readability Formulas, II	Britannica (Looking Glass Learning Products)	$69.00
2.0	All Levels	Learning Styles Inventory	Educational Activities, Inc.	$98.00
2.0	All Levels	Informal Reading Comprehension Placement	Educational Activities, Inc.	$49.95
2.0	All Levels	Publish It! LITE	Timeworks, Inc. (Dale Rettinger & Associates)	$59.95
1.0	All Levels	Readability Index	Educational Activities, Inc.	$29.95
1.0	ABE+, GED	Publish It! Easy v.2.1	Timeworks	$99.00

MATRIX OF FEATURED SOFTWARE

Visual Reference for Featured Software

Program Title Publisher	Cost	Curriculum Area					Program Method				Instructional Level					Hardware			
		Math	Lang	Read	L S	Sup	D&P	Sim	Tutor	Misc	ESL	ABE	ABE+	GED	DE	Apple	Mac	IBM	Other
A Day in the Life Curriculum Associates	$1000				♦			♦					♦	♦			♦	♦	
ALA Lab Systems American Language Academy	$2000				♦		♦				♦							♦	
Aldus Personal Press v2.0 Aldus	$150					♦				♦			♦	♦			♦		
Alge-Blaster! Davidson & Associates	$60 - $70	♦					♦		♦					♦	♦	♦	♦	♦	
America On Line America On Line/Quantum Computer Services	$5 -$10 per hour					♦				♦	♦	♦	♦	♦	♦		♦		
Approaches to Problem Solving Educational Publishing Concepts/EISI	$190				♦			♦	♦		♦		♦	♦		♦			
At Ease Apple Computer	$45					♦				♦	♦	♦	♦	♦	♦		♦		
Basic Math Competency Skills Building Educational Activities	$60	♦					♦		♦				♦	♦	♦	♦		♦	♦
Basic Math Competency: Measuring Educational Activities	$349	♦					♦		♦				♦	♦		♦		♦	♦
Brain Train Rehabilitation Psychology	$600 - $800				♦		♦				♦	♦	♦	♦	♦	♦		♦	
Claris Works Claris	$149					♦				♦			♦	♦			♦		
Computerized Placement Appraisal--Form A ICT (Instructional Communications Techology)	$200			♦						♦			♦	♦	♦	♦		♦	
Decimal Dungeon Unicorn Software Company	$30 - $50	♦					♦						♦	♦		♦	♦		♦
Diagnostic Prescriptive Readings Merit	$256			♦						♦			♦	♦	♦	♦		♦	

Program Title Publisher	Cost	Curriculum Area					Program Method				Instructional Level					Hardware			
		Math	Lang	Read	L S	Sup	D&P	Sim	Tutor	Misc	ESL	ABE	ABE+	GED	DE	Apple	Mac	IBM	Other
Fluency Practice Gessler Educational Software	$60		♦				♦				♦						♦		
Fraction Action Unicorn Software Company	$30 - $50	♦					♦						♦	♦		♦	♦		♦
Hands On Math, Volume 1 Ventura Educational Systems	$60	♦							♦			♦	♦			♦	♦		
Kid Pix Broderbund Software, Inc.	$50					♦				♦	♦	♦	♦				♦		
Math Blaster Mystery Davidson & Associates	$60 - $70	♦					♦						♦	♦		♦	♦	♦	
Math Tutor--Division Scholastic, Inc.	$70	♦					♦	♦	♦			♦	♦			♦	♦	♦	
Math Tutor--Fractions Part 2 Schoastic, Inc.	$70	♦					♦	♦	♦			♦	♦			♦	♦	♦	
Math Tutor--Multiplication Schoastic, Inc.	$70	♦					♦	♦	♦			♦	♦			♦	♦	♦	
Quick Talk Educational Activities, Inc.	$295		♦				♦				♦							♦	♦
Ratio and Proportions Educational Activities, Inc.	$65	♦					♦						♦	♦	♦	♦		♦	♦
Read 'N Roll Davidson & Associates, Inc.	$60			♦			♦		♦		♦	♦	♦			♦		♦	
Super Munchers MECC (Minnesota Ed. Computing Consortium)	$69				♦		♦						♦	♦			♦	♦	
Textbook Toolbox Chemeketa Community College	$99					♦				♦	♦	♦	♦	♦	♦		♦		
Words, Words, Words Profiles Corporation	$189			♦			♦				♦					♦			

FEATURED SOFTWARE

Annotated Listing of Featured Software

Program Title **A Day in the Life**

Life Skills

Publisher Curriculum Associates

Instructional Level ABE+, GED

Rating 4.0 **Cost** $999.99

Description

This program teaches about specific jobs and skills necessary to work in those jobs. Students must choose a job and complete specific tasks related to that job, including performing mathematical operations, measuring, reading, writing, and problem solving. Skills and strategies are taught in the job context. Lessons are available to show the student how to complete each task.

Evaluation

STRENGTHS: This is a real life simulation in which students must use basic skills necessary for success in specific jobs. Students choose the job they want to experience, learn what is involved, and master specific tasks related to the job.

WEAKNESSES: None given.

Program Title **ALA Lab System**

Reading

Publisher American Language Academy

Instructional Level ESL

Rating 3.0 **Cost** $2000.00

Description

This ESL program provides practice in pronunciation, vocabulary, and reading comprehension. Students listen to a native speaker of English, repeat what was said, and compare his/her own voice to the model. Other activities include crossword puzzles, writing from dictation, and listening to vocabulary words in context. An authoring system allows instructors to customize their own curriculum.

Evaluation

STRENGTHS: The authoring program allows instructors to create their own curriculum. The sound is clear and easy to understand.

WEAKNESSES: Getting started in the program is difficult. Students need a good understanding of English just to get past the main menu which does not use a mouse. ALA soundboard only supports ALA program, so you cannot run any other application requiring a board on the same computer.

Program Title **Aldus Personal Press v2.0**

Support

Publisher Aldus

Instructional Level ABE+ GED

Rating 3.0 **Cost** $150.00

Description

This desktop publishing program is suitable for students and/or instructors who want to publish class newspapers, brochures, or handouts. It contains a number of easy to use templates which make designing greeting cards, certificates, brochures, and newsletters relatively simple.

Evaluation

STRENGTHS: The learning curve is fairly short. The templates are great for students and instructors alike.

WEAKNESSES: The manual is very difficult to use; nothing seems to be listed in the index where the user would presume it to be. Some students may require supervision.

Program Title **Alge-Blaster!**

Mathematics

Publisher Davidson & Associates, Inc.

Instructional Level GED, DE

Rating 4.0 **Cost** $59.95 - $69.95

Description

Alge-Blaster teaches pre-algebra and algebra students to understand basic steps used in solving algebraic equations. Examples of these are order of operations, factoring, and quadratic equations. The program contains tutorials, practice problems and graphing games.

Evaluation

STRENGTHS: Students may ask the computer for an answer at any time. Students may score and exit during the middle of a lesson. Explanations at each level are very thorough.

WEAKNESSES: The level of skill required is too high for some students who may require tutor support.

Program Title **America On Line/Adult Literacy Telecommunications Network**

Support

Publisher America On Line/Quantum Computer Services

Instructional Level All Levels

Rating 4.0 **Cost** $5.00 - $10.00/hour

Description

America On Line is an inexpensive communication system. It is available for Macintosh and includes access to the White House, computer experts, and special interest groups like adult basic skills educators and small business owners.

Evaluation

STRENGTHS: It is very easy to access. A local access number is used which eliminates long distance phone fees.

WEAKNESSES: The only billing choices are credit cards or bank debit; therefore, it is difficult for a school program to use.

Program Title **Approaches to Problem Solving**

Life Skills

Publisher Educational Publishing Concepts /EISI

Instructional Level ABE+, ESL

Rating 3.0 **Cost** $189.50

Description

In this program, graphics are used to set up 36 stories which move the student through 16 essential problem solving objectives. Examples of the objectives are observing pictures, estimating, identifying unnecessary information, analysing, translating into mathematical symbols, and math reading skills. After leading the student by experiences through various levels of problem solving objectives, the student is questioned about the story.

Evaluation

STRENGTHS: Students will gain a good understanding of problem solving techniques if they start at the first lesson. The problem solving skills of the students progess and build as they work through the lessons.

WEAKNESSES: The process of accessing advanced levels is somewhat involved.

Program Title **At Ease**

Support

Publisher Apple Computer

Instructional Level All Levels

Rating 4.0 **Cost** $59.00

Description

A utility for the Macintosh which hides selected menus from the students. Students cannot change settings, move, delete, copy or rename files. The opening screen shows only the applications the instructor wishes the students to access. Student records and other sensitive materials are safe from unauthorized observation.

Evaluation

STRENGTHS: This utility prevents students and other unauthorized users from destroying or altering all sensitive memory functions of the Macintosh. It is easy to use, easy to install.

WEAKNESSES: None given.

Program Title **Basic Math Competency Skill Building**

Mathematics

Publisher Educational Activities, Inc.

Instructional Level ABE, GED

Rating 4.0 **Cost** $349.00 ($59.95 each)

Description

Basic Math Competency Skill Building is a set of eight software programs covering operations of whole numbers, fractions, decimals, percentages, and measuring. Each program begins with a detailed interactive tutorial. Then the student has an opportunity to practice, and the program ends with a quiz. The student has two chances to answer each problem correctly and then the program shows the student how to solve the problem. Problems are randomly generated.

Evaluation

STRENGTHS: It is easy for students to use. Each skill building disk offers a choice between easy, medium, and hard problems.

WEAKNESSES: The program does not explain how to enter answers using the keyboard.

Program Title **Basic Math Competency Skill Building: Measuring with a Ruler**

Mathematics

Publisher Educational Activities, Inc.

Instructional Level ABE+, GED

Rating 4.0 **Cost** $59.95

Description

Measuring with a Ruler is one program within the Basic Math Competency Skill Building set. The program guides the learner through measuring with a ruler, finding perimeter, and understanding circumference, pi (π), and geometric area. Each lesson includes an introduction, five practice examples, and a 10-question quiz. This is an excellent way to introduce learners to basic geometry formulas.

Evaluation

STRENGTHS: Graphics are bright and easy to understand. Students are encouraged to use calculators. Students who use this program receive a solid understanding of these geometric concepts.

WEAKNESSES: None given

Program Title **Brain Train**

Life Skills

Publisher Rehabilitation Psychology Associates

Instructional Level All Levels

Rating 3.5 **Cost** $600.00 - $800.00

Description

Brain Train is a software program developed for clients with traumatic brain injuries. It has programs applicable for Learning Disabled students. There are 55 "games" which can be chosen to improve certain cognitive skills including memory, tracking, and academic skills.

Evaluation

STRENGTHS: The program was designed to be user friendly for the clients/students. The games are fun and the graphics and instructions are easy. Students can track their own progress.

WEAKNESSES: Brain Train is not instructor friendly; the manual is not helpful. Adjusting variables and tracking files is difficult.

Program Title **Claris Works**

Publisher Claris

Support

Instructional Level ABE+, GED

Rating 4.0 **Cost** $149.00

Description

Claris Works is an integrated software program for Macintosh. Components include word processor, data base, spreadsheet, and graphics. A spell-checker and a thesaurus are included.

Evaluation

STRENGTHS: Provides an easy to learn opportunity for students to become familiar with workplace computer skills. Multi-sensory writing becomes easy, fast, and rewarding.

WEAKNESSES: Students need at least minimal keyboarding skills.

Program Title **Computerized Placement Appraisal--Form A**

Publisher I/CT (Instructional/Communications Technology)

Reading

Instructional Level ABE+, GED

Rating 3.5 **Cost** $200.00

Description

This program is a reading placement instrument designed to determine a student's independent reading vocabulary and comprehension level. The fourteen tests cover reading levels from 1.5 to 12.5. The management system includes printouts of the reading level of each subject with comprehension and rate.

Evaluation

STRENGTHS: This is an easy to use reading placement program that seems to be a fairly accurate indicator of reading and vocabulary levels. The print out is clear and may be very useful for students.

WEAKNESSES: Set up time with student is necessary. There are no keyboard instructions. The instrument does not replace BASIS testing.

Program Title **Decimal Dungeon**

Mathematics

Publisher Unicorn Software Company

Instructional Level ABE+, GED

Rating 3.0 **Cost** $29.95 - $49.95

Description

The multiscreen arcade action of this video game takes place in a dungeon. In order to work the way to freedom, the student must solve math problems. Problems include addition, subtraction, multiplication, division and a variety of decimal problems including conversion of decimals, fractions, and percents. Options to time math speed are available.

Evaluation

STRENGTHS: There are several levels of difficulty. Each student chooses his/her own difficulty level and operation. Full screen explanation of wrong answers are given.

WEAKNESSES: There is no recordkeeping function. Computer commands and instructions are only available on printed cards, not through menu selections. The program cannot be modified.

Program Title **Diagnostic Prescriptive Readings in Content Areas**

Reading

Publisher Merit

Instructional Level ABE+, GED, DE

Rating 3.0 **Cost** $256.00

Description

This diagnostic placement test determines the student's reading level (levels 1-6). The student practices reading and answers questions on passages. The instructor can customize the program by developing different questions and altering placement levels.

Evaluation

STRENGTHS: There is an interesting array of subjects and a variety of question types: main idea, vocabulary, etc. The program is easy to use.

WEAKNESSES: The program allows only one question for each passage. The test has limited management capabilities because students cannot be designated into seperate classes or groups.

Program Title **Fluency Practice**

Language

Publisher Gessler Educational Software

Instructional Level ESL

Rating 3.0 **Cost** $59.95

Description

This program is designed to teach ESL students proper English intonation, stress and rhythm. It utilizes speaking and listening skills for high intermediate to advanced ESL students.

Evaluation

STRENGTHS: It is very illustrative (visual), practical, and easy to understand. Most parts give helpful explanations with details about correct stress and intonation. This is especially useful for ESL students who have good pronunciation and need to learn more about intonation, stress, and pitch.

WEAKNESSES: Sometimes sound quality is poor, unclear, too fast, and slurred. Stress is sometimes difficult to identify. The introduction contains too much information and irrelevant details.

Program Title **Fraction Action**

Mathematics

Publisher Unicorn Software Company

Instructional Level ABE+, GED

Rating 3.0 **Cost** $29.95 - $49.95

Description

This multiscreen arcade action video game takes place in the mansion of a "mad professor". In order to work the way to freedom, the student must solve problems involving addition, subtraction, multiplication and division of fractions. Options to time math speed are available.

Evaluation

STRENGTHS: There are multiple levels of difficulty. Each player chooses his own difficulty level and operation. A full screen explanation follows wrong answers.

WEAKNESSES: The program has no recordkeeping function. Computer commands and instructions are only available on printed cards, not through menu selections. The program cannot be modified.

Program Title **Hands-On Math, Volume 1**

Mathematics

Publisher Ventura Educational Systems

Instructional Level ABE, ABE+

Rating 3.0 **Cost** $59.95

Description

Games and exercises allow students to discover and practice basic mathematical concepts. The student can learn about rulers, measurements, charts and basic mathematical relationships among whole numbers, fractions, and decimals.

Evaluation

STRENGTHS: Graphics are simple but not insulting. The program does a good job at teaching how to use a ruler and basic mathematical relationships. The worksheets are helpful.

WEAKNESSES: Graphics may be considered juvenile. Does not teach geometry or geometric relationships very well.

Program Title **Kid Pix**

Support

Publisher Broderbund Software, Inc.

Instructional Level ABE, ABE+, ESL

Rating 3.0 **Cost** $49.95

Description

This paint program is especially useful for family literacy. Program includes sound effects, patterns that burst into color, brushes that paint in a variety of ways and mystery tools that yield surprising results. It features a stamp activity with eight sets of rubber stamps, a Spanish and English Activity, and a connect-the-dot activity.

Evaluation

STRENGTHS: This is a creative program for adults and children to use together. Icons make it easy for 3 and 4 year olds to use independently.

WEAKNESSES: Spanish alphabet is difficult to use and does not include clear directions.

Program Title **Math Blaster Mystery**

Mathematics

Publisher Davidson & Associates, Inc.

Instructional Level ABE+, GED

Rating 4.0 **Cost** $59.95 - $69.95

Description

Animation and graphics are used to teach students to solve math word problems and improve critical thinking skills. Math skills include whole numbers, fractions, decimals, and percents; positive and negative numbers; interest and principle; and pre-algebraic concepts. Students are taught problem solving through five activities. Each activity is very different from the others and some require guess and check approaches.

Evaluation

STRENGTHS: This program strengthens student math scores and problem solving strategies, especially application, analysis and synthesis. The format is interesting and there are a variety of activities. Beginning and changing activities is easy. Hints are available to help students.

WEAKNESSES: Math Blaster Mystery does not include definitions of some of the difficult terms used in the games.

Program Title **Math Tutor--Division**

Mathematics

Publisher Scholastic, Inc.

Instructional Level ABE, ABE+

Rating 4.0 **Cost** $69.95

Description

This program offers complete instruction in whole number division beginning with the very basics up to three digit division. The program has a placement test students can take so they don't begin with inappropriate lessons.

Evaluation

STRENGTHS: The program is non-threatening and patient with repeated student error. It is easy to begin at or move to different levels. Good worksheets are available.

WEAKNESSES: It is an indepth program and may not be useful to the student who only needs a review.

Program Title **Math Tutor--Fractions part 2**

Mathematics

Publisher Scholastic, Inc.

Instructional Level ABE, ABE+

Rating 4.0 **Cost** $69.95

Description

This interactive program teaches students advanced addition, subtraction, multiplication and division of fractions. It uses more complicated fractions than part one in order to teach changing to higher or lower terms, cancellation and common denominator.

Evaluation

STRENGTHS: Students actively participate in solving problems. The program is menu driven which allows the student to change from one level to another.

WEAKNESSES: None given.

Program Title **Math Tutor--Multiplication**

Mathematics

Publisher Scholastic, Inc.

Instructional Level ABE, ABE+

Rating 4.0 **Cost** $69.95

Description

Thorough instruction in all facets of whole number multiplication. Students start with a placement activity and begin instruction where needed. Interaction with computer program is necessary in order to progress through the lesson.

Evaluation

STRENGTHS: Students can control the pace of the instruction. Changing levels is easy. The program is non-threatening and patient with repeated student error. Good worksheets are included.

WEAKNESSES: It is an indepth program and may not be useful to the student who only needs a review.

Program Title **Quick Talk**

Language

Publisher Educational Activities, Inc.

Instructional Level ESL

Rating 3.5 **Cost** $295.00

Description

High frequency, every day vocabulary words are introduced and used contextually with speech, graphics, and text. The program provides a step by step introduction to basic vocabulary and usage in thematic units. Students record their own voice and compare it with the speech model.

Evaluation

STRENGTHS: Speech component is good and graphics are helpful. Worksheets provide a great follow-through. Grammar points are consistent with repeated practice which makes it great for low level students.

WEAKNESSES: There is no student record keeping or bookmark feature. A mouse-compatible program would be helpful. Sound is good quality except final "s" is unclear or nearly inaudible. Installation of software is difficult. AniVox sound board is an older version and not compatible with most other sound board software applications.

Program Title **Ratio and Proportion**

Mathematics

Publisher Educational Activities, Inc.

Instructional Level ABE+, GED, DE

Rating 4.0 **Cost** $65.00

Description

This interactive program teaches ratio and proportion using an easy to understand, step by step approach. Either the teacher or student chooses the concept and the appropiate level to begin working.

Evaluation

STRENGTHS: It is a very visual program. Students select items for ratio and proportion. Presentation of the concepts is excellent, and students enjoy working with this program.

WEAKNESSES: There is no bookmark feature.

Program Title **Read 'N Roll**

Reading

Publisher Davidson & Associates, Inc.

Instructional Level ABE, ABE+, ESL

Rating 3.0 **Cost** $59.95

Description

Five activities focus on specific skills: identifying the main idea, recognizing facts/details, sequencing events, making inferences, and identifying key vocabulary words in sentences. Students are able to work on the specific skills they choose. A bowling game, which students really enjoy, reinforces key vocabulary.

Evaluation

STRENGTHS: Students experience success and opportunity to practice with many reading concepts. It is especially good for ESL students.

WEAKNESSES: Some students may find it too easy.

Program Title **Super Munchers**

Life Skills

Publisher MECC (Minnesota Ed. Computing Consortium)

Instructional Level ABE+, GED

Rating 4.0 **Cost** $69.00

Description

This educational game is designed to help players practice their recognition and categorizing skills in various fields of science, social studies, music, and popular culture. Players move a Muncher through a grid, instructing it to "eat" items that match a target rule. While doing so, the student must avoid the evil Troggles who eat Munchers.

Evaluation

STRENGTHS: A broad range of topics are presented in an exciting popular game format. It holds student interest well.

WEAKNESSES: None given.

Program Title **Textbook Toolbox**

Support

Publisher Chemeketa Community College

Instructional Level All Levels

Rating 4.0 **Cost** $99.00

Description

Textbook Toolbox is a hypercard-based authoring system for creating interactive electronic lessons on the Macintosh. It is a support tool for an instructor to design exciting electronic explanations, exercises, and explorations, and it is very adaptable to all levels of basic skills programs.

Evaluation

STRENGTHS: This user friendly authoring program allows a novice to create something very classy.

WEAKNESSES: Some of the techniques available on Textbook Toolbox take up a lot of memory space.

Program Title **Words, Words, Words**

Reading

Publisher Profiles Corporation

Instructional Level ESL

Rating 3.5 **Cost** $189.00

Description

This ESL program helps students learn to read and to spell common words. The material is presented in a single picture with single word format. A minimum amount of keyboarding skills are required.

Evaluation

STRENGTHS: The presentation of words and pictures is good. Limited keyboarding skills are required. This program provides a quick way for beginning ESL students to acquire some useful vocabulary.

WEAKNESSES: The user has to scroll through five or so credit pages before the program actually begins. The sound is of limited quality; it is understandable, but very computer generated.

LARGE COMPUTER ASSISTED INSTRUCTION SYSTEMS

Review of Nine Large CAI Sytems

LARGE COMPUTER ASSISTED INSTRUCTION SYSTEMS

Introduction

This section of the Software Buyer's Guide, 1993 edition was designed to provide basic skills programs with information which could be used as a basis for purchasing a large computer assisted instructional system.

Hardware and software companies produce a wide array of large and expensive computer-based instructional systems aimed at the population of adults who require remediation in basic skills. These companies advertise that their systems are efficient and effective, allow dramatic grade level gains with limited instructional hours, and minimize teacher time. Basic skills programs must make decisions about what equipment and software are appropriate for purchase and what options would best meet their needs using the limited dollars available. Those making the decisions are faced with a bewildering range of alternatives. The cost may range from $6,000 to $200,000 and the design may include a variety of components, such as student management systems, drill and practice exercises, collections of software products under the umbrella of one management system, assessment tools, or customization for individual students.

It is recommended that a CAI system be used as one part of an overall program in which learning is structured by a qualified instructor. The instructor is the most important factor determining the success or failure of any system. Even the most sophisticated computer learning system does not have the capacity to show students how to work effectively with others, and systems are usually somewhat limited in their ability to teach problem-solving or to show the application of skills in life situations. This makes it essential for a system to be complemented by classroom instruction or individual tutoring.

It is also crucial to coordinate a CAI system with the current instructional plan. Initially a student must be placed into the system appropriately, so if the basic skills program does not use a placement test which coordinates with the selected system, it may be necessary to adopt a different test. Placement into the system that relies solely on teacher judgement or input may lead to a "standard assignment" which treats all students the same and underutilizes the computer system. Eventually student assigments and work should be fully integrated into the whole basic skills curriculum. The relationship between the computer-assisted and the other components of the curriculum must be clearly defined and expressed.

LARGE COMPUTER ASSISTED INSTRUCTION SYSTEMS

Systems

Nine systems are included in this section. They are the five included in the 1990 report, *An Examination and Evaluation of Large Computer Systems for Use in Adult Basic Education Programs*, and four additional ones. An evaluation instrument and interviews with program site managers and vendors were used to provide the information in this review. *Points to Consider* and a *Comparison Matrix* show items to be considered in making any program determination. The project staff consulted with a variety of programs which use large CAI systems to determine which systems were most appropriate for this survey. The systems selected were:

System	Location of Observation	Year reviewed
CCC Computer Curriculum Corporation	Seattle Vocational Institute Seattle, WA	1990 1993
CCP Comprehensive Competencies Program U.S. BASICS	Skagit Valley College Mt. Vernon, WA	1990
CRS MacMillan/McGraw-Hill,	Horizons Everett Community College Everett, WA	1993
INVEST Jostens Learning Corporation	Chemeketa Community College Salem, OR	1993
Pathfinder Pathfinder Learning Systems Corp	Renton Technical College Renton, WA	1993
Classworks Computer Networking Specialists	Thurston County Youth Service Center Tumwater, WA	1990
PLATO The Roach Organization	Highline School District Burien, WA	1990
WICAT Jostens or Centec	Clover Park Technical College Tacoma, WA	1990
WASATCH Clallum Bay Correctional Facility	Peninsula College Clallum Bay, WA	1993

INDIVIDUAL LARGE CAI SYSTEMS DESCRIPTIONS

CCC SYSTEM (Reviewed 1990; 1993)

The CCC Instructional System is a product of the Computer Curriculum Corporation in Palo Alto, California. It is a "closed" system which uses only the software which has been integrated into that system. (An IBM-based system is also available, which makes the system more open, but precludes the use of remote sites.) There are two types of courses within the system—lessons courses and strand courses. In lessons courses, students master a set of objectives one by one. In strand courses, students select a curriculum area such as reading, writing, or math, and then work on a number of objectives which are interwoven. The strand courses are the more recently developed ones and are much more sophisticated in nearly every way than the lessons courses. Each work station has a mouse which can be used to manipulate on-screen tools (such as a ruler), draw lines, etc. Some unique features of CCC are that it can continuously adapt instruction to an individual learner's performance, can provide some parts of the ESL instruction in any one of six foreign languages, can predict how long it will take a student to reach a goal, can print out supplemental worksheets for a student based on that student's current study, and can be used for electronic mail, sending messages from the instructor to one or more students on the computer screen. More recently a CD-ROM version is available which makes it possible for a program to have the entire system on just one station for a cost of about $5,000.

CCP SYSTEM (Reviewed 1990)

CCP, The Comprehensive Competencies Program, is distributed by U.S. BASICS, the United States Basic Skills Investment Corporation, of Alexandria, Virginia. It is primarily a learning management system which references a large number of materials and a variety of media, including textbooks, workbooks, cassette tapes, and videos in addition to software. On the CCP system, a student takes a paper/pencil pretest which is scanned, and a diagnostic profile of strengths and weaknesses is printed out. The student and teacher then conference to determine priority areas of study and the teacher makes assignments using the CCP list of recommended materials. After completing these assignments, the student takes a paper/pencil test which is again scanned and progress sheets are printed out. CCP released a newly designed system, using an IBM management station with a hard drive, in late spring 1990, just as the final report of the first study was being prepared. It is the earlier version of CCP which was examined for this guide, and upon which most of the comments are based. This earlier version is no longer available for purchase, and U.S. BASICS feels that their new system has many advantages over the old. The basic program design has not changed, however, only those aspects which relate directly to the use of a hard drive rather than floppy disks.

INDIVIDUAL LARGE CAI SYSTEMS DESCRIPTIONS

CLASSWORKS SYSTEM (Reviewed 1990)
ClassWorks, published by Computer Networking Specialists (CNS) in Washington state, is primarily a management system for an assortment of software from various publishers such as Hartley, Milliken, Random House, and Educational Activities. This system organizes the various programs and reports student performance and progress. Software which can be added to the system is limited only by the ability of the corporation to acquire the rights to do so and by the hardware needed to support it. However, it must be added by the corporation, not by an individual program or instructor. ClassWorks uses a Local Area Network, with an Apple IIe or IIGS as the master computer, and was designed to be similar to AppleWorks. Purchasers of the system are not buying unique software, they are buying a software management tool, a variety of courseware organized into meaningful assignments, and the capacity to track and document student progress.

CSR SYSTEM (Reviewed 1993)
Computer Systems Research is a product of MacMillan/McGraw-Hill Company. It operates under MS-DOS platform with a variety of file servers. It has instructional materials on five levels of Reading, Writing and Mathematics. The management system is limited to its own software; non-CSR software can be listed on the menu, but student performance will not be monitored or recorded. The lessons are designed for adults and organized into discrete objectives which can be grouped in a variety of ways. CSR has placement and assessment instruments which are done the computer and used in making learning prescriptions for individual students.

INVEST SYSTEM (Reviewed 1993)
The INVEST system is distributed through Jostens Learning Corporation. It combines several software learning packages which are designed specifically for the adult learner by concentrating on relevance and cognition. Its basic literacy package is Hartley Project Star, one of its ESL packages is Davidson English Express, and the higher tier level uses WICAT materials. There are three tiers of Literacy, ABE and GED which incorporate life skills with metacognition and problem solving. It also features a higher level of mathematics. The diagnostic and prescriptive management system and computer branching techniques provide a customized program of instruction for each student.

PATHFINDER SYSTEM (Reviewed 1993)
Pathfinder is distributed by Pathfinder Learning System Corporation of Toronto, Canada. It is primarily a learning management system which references a large number of materials and a variety of media, including textbooks, workbooks, cassette tapes, and videos in addition to software. It also includes an IBM software package of reading, writing, and mathematics. The student takes a paper/pencil pretest and the instructor enters the student results into the system. The system provides an assignment sheet for each student. It is flexible and customizable.

INDIVIDUAL LARGE CAI SYSTEMS DESCRIPTIONS

PLATO SYSTEM (Reviewed 1990)

The PLATO system is a product of The Roach Organization in Rolling Meadows, Illinois. It is an open architecture system, which means that any software from the PLATO library may be completely integrated into the management system, and it is possible to add non-PLATO software to the management system, although the recordkeeping for this type of software is not as detailed. Individual lessons may be selected and grouped in the management system as a particular course. For example, appropriate lessons could be selected and listed as "Pre-GED Reading." PLATO is designed to provide only computer-assisted instruction, although notebooks of supplemental worksheets are provided for duplication if desired.

WASATCH SYSTEM (Reviewed 1993)

WASATCH system is a product of Wasatch Educational System in Salt Lake City. This system is MS-DOS based, and non-system software can be used for networked or stand alone applications. It includes off-line consumables, texts, and teachers' guides. Within each curriculum content objective, students may advance through the levels or have reinforcement or enrichment within each level. This system has electronic mail so that the instructor can send individual messages and comments about assignments to the students. It also includes a word processor with a built-in spell checker and a calculator which can be accessed from any application. An optional GED Practice Test package is available which allows students to take the test on-line and times and scores the test items.

WICAT SYSTEM (Reviewed 1990)

WICAT is distributed by several venders including Jostens and Centec. It might be considered a "semi-open" system because any WICAT software can be completely integrated into the management system, but non-WICAT software can only be listed on the menu. It runs on an IBM system, can use any IBM software, and non-system software can be listed on the menu, although student performance will not be monitored or recorded. WICAT has assessment instruments which are taken on the computer, including a basic skills test, official GED Practice tests, and a learning styles inventory. These assessments are used in making learning prescriptions for individual students.

Large Computer Assisted Instruction Systems
Checklist for Evaluation

Site Design Factors

Every system should have at least one person with primary responsibility for its use; this should be a person with strong organizational skills and the ability to work well with students. None of the systems examined is so complicated that it requires staffing with experienced computer personnel. Staff chosen for primary lab responsibility ideally should feel comfortable with computers and enthusiastic about the contribution they can make to the program. It is not advisable to have a number of instructors equally sharing this task; one person should monitor the overall use and maintenance of the system and report and correct any difficulties. Acquisition of a computer system will also require consideration of the facilities for the system such as electrical connections, security provisions and furnishings. In order to get maximum use of the system, flexible scheduling may be desirable, for example, accessibility on weekends and evenings.

Points to consider:

1. Staffing needs: Clerical, Technical , Instructional
2. Facilities
3. Scheduling

Points of comparison: Site Design Factors

	CCC	CCP	CSR	ClassWorks	INVEST	Pathfinder	PLATO	WASATCH	WICAT
Staff Training	3-4 days initial training, follow-up as needed, regular site visits	6 days initial training required with 2 days follow-up, regular regional/ national conferences and user support group	2 days training and installation; more may be arranged as required, user support group	2 days training and installation; more may be arranged as required	5 days for two people at a training center; 2 on-site follow-up days the first year	5 days training; annual updates and additional training available	3 days initial training, 2 days follow-up	2 days initial training; 3 days follow-up during the first year; additional training available	5 days initial, 5 days follow-up if trainer is available

Cost Factors

In this guide, cost information is intended for comparison and estimation purposes only; the cost of the various systems depends upon options and configurations selected. Some of the systems have enough flexibility to allow the use of previously owned computers for student work stations if they are of the right type, although it is important that you follow the recommendations of the publisher. In addition to a management station and student work stations, systems may require a printer and some extra components such as a speech synthesizer or an optical scanner. Consideration should be given to the quality of the hardware and software components, graphics and sound, instructional material, and system documentation manuals. Another cost consideration which is important for ABE programs, where funding is often problematic, is that most publishers have lease options for their systems, making it possible to fund large systems over the course of several years.

Points to Consider

1. Cost of system, including needed hardware and software and ongoing licensing or user fees
2. Possibility of leasing system rather than outright purchase
3. Possibility of using already-owned hardware
4. Possibility of using hardware for other purposes, such as word processing or computer programming classes
5. Type of computers for management and student stations
6. Other hardware requirements (printer, modem, speech synthesizer, etc.)
7. Durability of hardware
8. Quality of hardware, software and systems documentation manuals

Cost Factors

Points of Comparison: Cost Factors

	CCC	CCP	CSR	ClassWorks	INVEST	Pathfinder	PLATO	WASATCH	WICAT
Manager Station/ Operating System	Microhost/ UNIX	Apple with 3 drives(old) or IBM/DOS 3.3	486 MS-DOS/MS-DOS	Apple IIe or IIGS with LAN/ DOS 3.3	486 MD-DOS Novelle	Novelle cerified/MS-DOS with tape back-up	Control Data 386/ MS-DOS	486 MS-DOS Novelle with tape back-up	IBM Model 60/ I-Class (newest)
Workstation Options	IBM, Atari, Tandy, Apple IIe/IIGS	varies with software, stand-alone	MS-DOS	Apple II, IBM, or MS-DOS	IBM, Tandy, Jostens computers	one station VGA with 1 M RAM with MS-DOS	Control Data or other PC (incl. PS/2)	IBM, Tandy, MS-DOS with windows	IBM, Apple, Tandy
Maximum No. of Stations	128	no limit, non-integrated	100	40	64	50 (100 w/less efficiency)	50 (100 w/less efficiency)	100	64
Remote Capability	yes	no	yes: not suggested	no	yes	yes	yes	no	yes; not suggested
Peripherals	mouse, sound	not with computers; system has other AV components	mouse, sound	sound	mouse, synthesized speech, CD-ROM for management computer	mouse system has other components not with computers	sound with ESL coming soon	mouse, synthesized, speech, CD-ROM	sound
Non-system software	yes	yes	yes	yes	yes	yes	yes	yes	yes
Upgrades	annually, included in maintenance	new modules available for purchase	available the first year	management upgraded periodically	annual and periodic upgrades	annual upgrades	upgrades available	annual upgrade available	annual upgrade; can trade software
Annual Licensing/ User Fee	$200 per terminal for updated software,	$1000 ongoing for members of collaboration	none	$1000 optn'l for service/up grade, ongoing	none, unless additional options	$3000-$6000 annual license	$4800 for 4 yrs. (then paid-up)	$3000 annual license	10-13% of purchase price, ongoing
Cost: Approximate [Note: This information is only included for general estimation purposes. Systems vary widely and cost is often highly negotiable.]	$53,000 for mgmnt station, 8 work stations, least expensive software, training, set-up, 1st yr. license. ESL component and IPS software are extra cost.	$49,000 for mgmnt station, 8 work stations, 3 video recorders, 5 audio cassettes all needed print, AV, and software mat'ls, and training	$7500 for one station to $26,000 for 10 stations	$37,000 for mgmnt software, hard drive and connectors, installation, and least expensive ABE & GED instructional software. Does not include hardware.	$11,000 for one station to $68,000 for 10 stations with installation	$35,000 for basic package to $90,000 for complete package. Computer managed instruction. Does not include hardware.	$53,000 for mgmnt station, 8 work stations, software, training, set-up, 1st yr. license	$23,000 for 5 stations (without Windows) to $38,000 for 10 stations with complete package	$60-65,000 for mgmnt station, 8 work stations, software, training, set-up, 1st yr. license

Usability Factors

Purchasers should consider how "user friendly" a system is, including the use of on-screen menus and directions, bookmarks to remember where the student stopped at the last session, the ability to review instructions, the level of typing skill needed, and the ease of generating a report. All systems examined were reasonably usable. A system may or may not be modifiable; some systems allow instructors to add instructional software or to reference other instructional materials. Most allow instructors to set the level of mastery or the rate of presentation, and some have the ability to customize the instructional sequence. Some systems have the option of re-arranging the objectives to match a particular course and eliminating unneeded parts of the curriculum or adding extra parts. Additionally, systems can be utilized for other non-system purposes such as word processing or programming classes. It's important to recognize that a system which can be easily and extensively modified will then be limited in the amount of branching and spiraling which it can do.

Points to Consider

1. Control over program: on-screen menus, ability to "back up"
2. Default settings for speed, mastery, etc., which can be either accepted or modified
3. Level of computer expertise and typing skill needed for students and staff
4. Speed of response time in management and instructional software
5. General ease of use in generating reports, making assignments, modifying settings
6. Openness of system: ability to add or rearrange curriculum
7. Support and Service provided

Points of Comparison: Usability Factors

	CCC	CCP	CSR	ClassWorks	INVEST	Pathfinder	PLATO	WASATCH	WICAT
Authoring System?	no	on new system, tests, test key, lessons, graphics	no; company will provide customized programs	no	can introduce additional software	can customize tests, lesson paths	no	no	can customize tests
Support/ Service	800# hotline, local technicians, with IPS module, technicians can work on system via modem	800# hotline for systems operation, assistance also available via modem	800# hotline, technicians can work on system via modem	800# hotline, technicians can work on system via modem	800# hotline, technicians can work on system via modem; regional technicians	800# hotline, technicians can work on system via modem	800# hotline, systems identifies problem by number, technicians in San Jose	800# hotline, technicians can work on system via modem	800# hotline, local technicians

Curriculum Factors

The most important consideration in instructional design is whether learning objectives are presented sequentially, from a menu; or whether the system is capable of "branching" a student into review materials or more advanced materials, and of "spiraling" a student through objectives, introducing a topic and then returning to it for further instruction or review. Additional considerations includes available curriculum materials, types and effectiveness of instructional materials, and the intended audience. Some systems have built-in assessment and placement instruments which automatically measure a student's performance level and then move the student into appropriate instruction. Other systems require that the student complete a pre-test and that the instructor make assignments based on the pre-test performance. Additionally, systems have different ways of assessing student progress within the curriculum. Systems vary widely in the sophistication of feedback provided.

Points to Consider

1. Method of assessment and placement into system
2. Movement through curriculum (discrete sequential, branched, and/or spiraled)
3. Clarity and relevance of learning objectives
4. Quality of curriculum materials, including instructional software
5. Currency of curriculum materials, including software
6. Variety of question and response types
7. Variety of instructional materials and approaches
8. Prevention of guessing or random answers
9. Application of curriculum materials to life situations
10. Teaching as well as testing of higher order thinking skills
11. Feedback that reinforces after correct responses and assists after incorrect responses
12. Criteria for mastery
13. Ability of student to see progress
14. Variety of instructional materials (CAI or multi-resource)

Points of Comparison: Curriculum Factors

	CCC	CCP	CSR	ClassWorks	INVEST	Pathfinder	PLATO	WASATCH	WICAT
Assessment /Placement	on system	TABE entered by scanner	on system TABE on line	external placement	on system	on system	on system	on system	on system
Available Curriculum Materials for ESL	Listening, Reading, ESL-specific instructions in six languages	Listening/ Speaking, Reading, Writing ESL-specific	none	some of software packages may be useful with ESL; no ESL-specific	the ESL component is English Express	some of software packages may be useful with ESL; no ESL-specific	Listening/ Speaking, ESL-specific; new release	Some software may be applicable for ESL	ESL specific at very low level, Listening only
Available Curriculum Materials for ABE/GED	1700+ hours of CAI written for CCC	print, AV, and CAI from various publishers and (new version) written for CCP	424 courses of CAI written for adults	1500 software programs from various publishers	2000+ hours of CAI from 6000 lessons	IBM software on the system, print, AV, and other software	1500+ hours of CAI written for PLATO	30 courses at 12 levels; one level is specifically for adults	2500+ hours of CAI written for WICAT

Recordkeeping Factors

When examining a system, consider whether record keeping is done by hand or by computer, what reports are available, how easy it is to use the records management system, and number of records that can be maintained within the system.

Points to Consider

1. Amount of recordkeeping done manually vs. automatically
2. Amount of required recordkeeping
3. Reports generated by system
4. Number of records which the system can store
5. Demographic and program data which can be collected and reported

Points of Comparison: Recordkeeping Factors

	CCC	CCP	CSR	ClassWorks	INVEST	Pathfinder	PLATO	WASATCH	WICAT
Reports available	assignment results incl. time spent, grouping, gains report, time needed to reach goal (other options)	test performance, student hours, mastered objectives, program data, student demographics	assignment results, class roster, class status, class summary, mastered objectives	assignment results, class roster, class status, class summary, mastered objectives	learner assignments, progress, and mastery reports, instructor reports, administrative reports	test performance, student hours, mastered objectives, program data, student demographics	progress reports incl. time spent, class profiles	test performance, objectives, time on task comparison, program data	individual and class progress, incl. time spent
Student Records Capacity	5000 student records	Apple w/floppy limited only by number of disks; new IBM limited only by storage capacity of hard drive	1000 current student records	2000 students with up to 9 classes each	limited only by disk storage capacity	999,000 records	limited only by disk storage capacity (which can be increased) Standard system is at least 2000	limited only by disk storage capacity	limited only by disk storage capacity. Standard system is 35,000

RESOURCE GUIDE

Glossary of Terms
Hardware Decisions
Listing of Publishers
Periodicals
Order Form for Additional Copies

GLOSSARY

Back-up disk: the copy of a program that may be made or purchased from the software supplier. It is important to make/purchase back-ups for software and obtain publisher permission.

Baud: a unit of measurement used in telecommunications to specify the speed of data transmission in one second intervals (1 bit per second).

Bit: a binary digit which is the smallest unit of information recognized by the computer.

Boot: to start or restart (load) the program into the computer (disk drive).

Byte: measurement of several bits often denoting a single character.

CD-ROM: Computer Disk-Read Only Memory. The disk cannot be altered by the user. Usually a CD-ROM disk contains an enormous amount of information and is used as a data resource.

Compatibility: the ability to run a program on a variety of computers, or the ability of different hardware to work together. Most software is compatible within a specific line of computers, ie. Apple or PCs, but not between computer types (operating systems). Efforts in the intercompatiblity of systems are advancing.

Connect Time: the length of time you are "on" the computer during time sharing.

CPU: Central Processing Unit; the chip that directs the loading and directing of information within the computer, the "brain" of the computer.

CRT: Cathode Ray Tube is the picture tube used for video display on a screen.

Cursor: a moving, sliding or blinking symbol on a CRT screen that shows the location of the next character.

Database: any collection of data with the use of software that enables the user to compile records and then sort, reorder, selectively retrieve, and print them. Think of a database as a powerful Rolodex file with the added feature of being able to print various combination reports.

Desktop Publishing: the use of a computer to combine writing with graphics. This is the electronic equivalent of the cut-and-paste layout method.

Disk: (*see* floppy disk or hard disk).

Disk Drive: a device that reads from a magnetic disk into computer memory and vice versa.

Documentation: the written information that accompanies the software. The documentation should include information about operating and troubleshooting the software.

GLOSSARY

DOS: Disk Operating System; a collection of programs linking a user and a disk drive and providing the computer with instructions on how to operate the software. The most common DOS systems are for Apple (ProDOS or DOS version) and for IBM and compatibles (MS-DOS).

Dot Matrix Printer: a printer that uses a series of closely spaced dots to print images onto external paper or film.

Electronic Mail: the transmission, storage, and distribution of messages in digital form using the telephone line. This is commonly known as E-mail.

Floppy disk: a magnetic wheel used to store data and programs outside the computer. Disks come in 5.25 inch and micro-floppy size of 3.5 inch.

Hard disk: a rigid magnetized platter to store large amounts of information. Hard disks enable users to access more information faster, back-up the information quickly, and store more information.

Hardware: the physical equipment of a computer such as; keyboard, printer, disk drive, CPU, monitor.

High resolution: the quality and accuracy of detail of an image on the picture screen

Integrated Learning Systems: a large network of computers with a mangement system, student software, and student record-keeping. Some systems automatically place students into the curriculum, move students through the curriculum, and test students' mastery of skills. These systems, typically sold with hardware, can cost $40,000 or more.

Internet: a global network of computer networks providing access to a variety of services from over 75 countries including electronic mail, database and library research, and file sharing and transfer.

LAN: Local Area Network; the hardware and software connecting computers to each other using cables. Usually the software is stored in one central location on a hard disk.

Laser printer: a printer that uses a laser beam to print images onto external paper or film.

Load: place information, usually through use of a program from an externalsource (disk drive, hard disk) into the computer.

Menu: the listing of program options that appear on the monitor when the program is initiated and allows the user to select which part to use.

GLOSSARY

Modem:	MOdulator-DEModulator; a device which enables the user to transfer information between computers over telephone lines.
Network:	a system of interconnected computers. (*see* LAN, ring and star network)
Optical Disc Storage:	a high density storage device that uses a laser. There are three main categories--prerecorded disks, disks that a laser drive can write on but not erase, and erasable disks.
RAM:	Random Access Memory; the amount of memory available in the computer for a program to be loaded, read or written to, and manipulated. The space is limited.
Ring Network:	a computer network configuration connected in a loop or ring configuration.
ROM:	Read-Only Memory; the permanent system instructions built into the computer. This is also called firmware.
Save:	the command that directs the computer to store the contents of the RAM on a disk or other storage device.
Software:	sets of programs that control the computer and make it operate.
Star Network:	a computer network configuration connected from a central host hub computer and radiates to satillite computers.
Startup:	the process of putting computer system devices to proper initial conditions.
Telecommunications:	a transfer of information from one place to another over telephone lines.

HARDWARE DECISIONS

Essential Hardware

Computer
A wide variety of computers is available today, but the largest number of educational programs are available for the Apple family of computers. The standard memory for the Apple II+ is 48K, for the IIe is 64K and for the IIc is 128K. Many of the Apple programs require a minimum of 64K. Many programs are also available on Macintosh and IBM compatible computers.

Disk Drive
One disk is a necessity; two is preferable unless you have harddrives.

Monitor
A good quality monitor, either monochrome or color, is essential. A monitor that can be tilted to the right viewing angle will save neck strain and some monitors have a softer screen tone than others. When previewing software, be sure to view it on the monitor(s) most likely to be used with instuction.

Printer
Most instructional programs can be run without a printer, but many do have an optional printing capability and a printer is essential for word processing or recordkeeping programs. Unless you really need to have letter quality printng, a dot matix printer is adequate, is less expensive than others, and is needed for some types of graphics.

To hook a computer to a printer, an interface card is necessary. These are available in a variety of price ranges.

Optional Hardware

CD-ROM
Some programs incorporate the use of CD-ROM for additional memory and graphics capibility. This requires the purchase of additional hardware.

Integrated Learning Systems
This is a large network of computers which utilizes a management system with student presciptions for skill enhancements. The whole system can cost $40,000 or more. System designs vary significantly in content, ability to customize curriculum, and management tools, so evaluate their potential use in your particular setting.

Mouse
This hardware is used with some computers, including IBM compatible and Macintosh computers. In some programs it can be used instead of the keyboard.

HARDWARE DECISIONS

Optional Hardware

Cassette Connect Device
This device connects a cassette tape recorder to the game port of the computer. This allows the computer to take control of turning the tape recorder on and off and results in audio of naturally sounding speech.

Sound Sytems
Interface cards are available that attempt to replicate human voice.

Speech Synthesizer	This can "read" computer text aloud. Sometimes pronunciation is inaccurate or difficult to understand.
Speech digitizer	The software has pre-programmed sound. It is closer to the human voice than the synthesizer, but is not alterable.

Academic Hallmarks

P.O. Box 998
Durango CO 81301
(303) 247-8738

Academic Therapy Publications

20 Commercial Blvd.
Novato CA 94947
(800) 422-7249

Advanced Ideas, Inc.

591 Redwood Hwy Suite 2325
Mill Valley CA 94941
(510) 526-9100

Aldus

9770 Carroll Center Road Suite J
San Diego CA 92126
(619) 628-2320

America On Line/Quantum Computer Services

Distribution Center Suite 200, 8919
Vienna VA 22182
(800) 827-6364

American Language Academy

1401 Rockville Pike Ste 550
Rockville MD 20852
(800) 346-3469

Apple Computer

2052 South Mariani Avenue
Cupertino CA 95014
(800) 776-2333

Applied Microsystems, Inc.

P.O. Box 832
Roswell GA 30077
(404) 552-9000

Aquarius People Materials, Inc.

P.O. Box 128
Indian Rocks Beach FL 34635
(800) 338-4400

Artificial Intelligence Research Group

921 N. La Jolla Avenue
Los Angeles CA 90046
(213) 656-7368

Artsci, Inc.

2210 W. Magnolia
Burbank CA 91506
(818) 985-2922

Atari, Inc.

1399 Moffett Park Drive
Sunnyvale CA 94088
(408) 744-0880

AWA Software

P.O. Box 1618
Gadsden AL 35902
(800) 628-4101

Behavioral Engineering

230 Mt. Herman Road #207
Scotts Valley CA 95066
(408) 438-5649

Bertamax Educational Software, Inc.

1806 Tenth Street
Anacortes WA 98221
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